

Some Remarks on Kirby's Synonymic Catalogue of Orthoptera, Vol. III, with Additional Notes on Vols. I and II.

BY A. N. CAUDELL, of the Bureau of Entom., U. S. Dept. Agric., Washington, D. C.

Having reviewed the first two volumes of this excellent work,¹ I now wish to present some critical notes on the third volume. Most of the notes here made pertain to North American forms. Some miscellaneous notes on volumes I and II, additional to my former review of those two volumes, are appended.

P. 4.—Mr. Kirby has overlooked the fact that *Phyllotettix* Hancock is a synonym of *Choriphyllum* Serville.² That this is true, however, there can be no doubt and the species listed under *Phyllotettix* by Kirby should be catalogued under *Zaphyllonotum* Caudell while the genus *Phyllotettix* and its equivalent *Phyllonotus* Hancock should be listed in synonymy under *Choriphyllum* Serville.

P. 48.—*Acrydium abbreviatus* Morse is listed as a synonym of *hancocki*. It is really a variety well worthy of a name. The same is true of *affinis* Hancock and *costatus* Hancock, which are varieties respectively of *crassum* Morse and *arenosum* Burmeister. As a matter of fact but few varieties are listed by Kirby other than as synonyms of the species of which they are really varieties.

P. 50.—*Telmatettix burri* Hancock is here catalogued as a species of *Hedotettix* but the describer of the species has shown it to be a synonym of *Paratettix scaber*.³

P. 59.—Here Mr. Kirby has entered a *Tettigidea gracilis* Scudder. This seems to be an error as no such species appears to have ever been described, no name *gracilis*, either new or otherwise, appearing at the reference cited by Kirby. Thus

¹ Proc. Ent. Soc. Wash., vol. vii, p. 84-88 (1905); Can. Ent., vol. xl, p. 287-292 (1907).

² Caudell, Proc. Ent. Soc. Wash., vol. xi, p. 113 (1909).

³ Trans. Ent. Soc. Lond., p. 410 (1909).

the name *gracilis* of Bruner is not shown to be preoccupied and the name *exigua*, which is proposed by Kirby, p. 58, to replace it, is unnecessary and falls into synonymy under the name it was proposed to replace.

P. 87.—*Taxiarchus septentrionalis* was described by Bruner, not by Rehn as here listed.

P. 104.—The *Truxalis angusticornis* of Stal is a synonym of *Dichromorpha viridis*. It is correctly listed on page 125.

P. 105.—Prof. Bruner's paper in Proc. U. S. Nat. Museum, Vol. XXX, p. 613-694 was published June 5, 1906, not in February as quoted by Kirby. Thus Bruner's *H. lamellipes* should be listed in synonymy under *Hasinus* Rehn, which was described in May of the same year, giving it precedence by a month over Bruner's species.

P. 107.—The species *enslaved* and *valida* of Rehn are referred to *Syrbula* without question by Rehn and Bruner.

P. 108.—The *Pedioscirtetes pulchella* of Bruner has been referred to the genus *Acrocara* for the last twenty years.

P. 109.—*Acrocara maculipennis* is found in the United States, having been recorded from Arizona by Rehn and Snow. Specimens from that state are in the United States National Museum.

P. 110.—The genus *Gymnes* of Scudder is a synonym of *Boottettix* Bruner as first suggested by Bruner⁴ and later definitely established by Caudell.⁵

P. 112.—*Eupedetes* is a synonym of *Eritettix* and *Eupedetes carinatus* Scudder is a synonym of *Eritettix variabilis* Bruner.⁶

P. 115.—The *Stenobothrus subconspersa* of Walker is very likely a synonym of *Amblytropidia occidentalis* Saussure.

P. 118.—*Oeconomus* Scudder is a synonym of *Napaia* McNeill and *Oeconomus altus* is a synonym of *Napaia gracilis* Bruner.⁷

P. 122.—Kirby omits *Orphulella losamatensis* Caudell, Proc.

⁴ Biol. Cent.-Amer., Orth., vol. ii, p. 52 (1904).

⁶ Proc. U. S. Nat. Mus., vol. xxxiv, p. 73 (1908).

⁶ Rehn, Proc. Acad. Nat. Sci. Philad., vol. lix, p. 331 (1907).

⁷ Biol. Cent.-Amer., Orth., vol. ii, p. 90 (1904).

Ent. Soc. Wash., Vol. XI, p. 113 (1909), a specific name proposed to replace the *walkeri* of Bruner, 1906 which was shown to be preoccupied by the *O. walkeri* of the same author proposed in 1904. Mr. Kirby erroneously lists this later *walkeri* under the date of 1904 and quotes it, together with the *walkeri* of 1904, in synonymy under *punctata* DeGeer. The later described *walkeri*, that of 1906, has nothing to do with the one of 1904. It is a distinct species for which the name *losam-atensis* will have to be used.

P. 125.—*Dichromorpha brunnea* Scudder is a color variety of *Dichromorpha viridis*, not a distinct species as here listed.

P. 127.—*Fenestra* cannot be credited to Brunner as it was used by him in an invalid manner, having no species connected with it.⁸ The first writer to validate this genus by referring to it a valid species was Giglio-Tos⁹ who referred to it the single new species *bohlsii*, which is therefore the type. The genus *Dichroatettix* of Bruner, based upon the single species *viridifrons*, is a synonym of *Fenestra* Giglio-Tos, its type being synonymous with that of *Fenestra* as pointed out by Rehn.¹⁰

Mr. Rehn was perfectly correct in replacing the genus *Fenestra* as used by Bruner in 1900 by the new name *Coccyto-tettix* and this genus should be used for the species listed by Kirby under *Fenestra*: these are *pulchripennis*, *intermedia*, and *argentina* of Bruner and *linearis* of Rehn.

P. 128.—*Coloradella* was established by Brunner in 1893 but was invalid, having no included species. The next use of the name was by Bruner¹¹ who questionably referred to it the *Stenobothrus brunneus* of Thomas. This species, being a questionably included one, cannot become a geno type according to commonly accepted usages of nomenclature and thus

⁸ Such genera are quite generally considered by entomologists as *nomina nuda*. This is certainly the only satisfactory way of treating such genera.

⁹ Zool. Jahrb., vol. viii, p. 807 (1895).

¹⁰ Proc. Acad. Nat. Sci. Philad., p. 31 (1906).

¹¹ Ann. Rept. Nebr. Board of Agric., 1896, p. 129 (1897).

the genus is yet invalid. Now Mr. Kirby uses the genus and includes one species which he calls *Coloradella brunnea* Bruner, giving as the original reference the place where Bruner questionably referred Thomas' *brunneus* to the genus, apparently considering that Bruner misidentified Thomas' species. But misidentifications should not be perpetuated as distinct names and besides a misidentification on Bruner's part is not evident. Bruner never having described such a species there is no *Coloradella brunnea* Bruner and therefore the generic name *Coloradella* is still invalid.

P. 129.—*Psoloessa buddiana*, *ferruginea* and *maculipennis* are synonyms of *P. texana*.¹²

P. 130.—*Stirapleura mescalero* Rehn belongs to the genus *Psoloessa* and as a synonym of *texensis*.¹³

P. 134.—*Scyllina calida* Bruner has been recorded from Arizona.¹⁴

P. 135.—*Ageneotettix arenosus* Hancock is a synonym of *A. scudderi*.¹⁵

P. 135.—The genus *Aulocara* is, by nearly all essential characters, Oedipodiiian as shown by the writer some years ago.¹⁶

P. 159.—*Gomphocerus clepsydra* and *carpenteri* are synonyms of *clavatus*.

P. 166.—*Staurorhectus glaucipes* Rehn has been removed to the genus *Amblyscapheus* and *A. lineatus* Bruner falls into synonymy under this species, *glaucipes* being the older by a month.¹⁷

P. 172.—The *Stetheophyma doranii* of Goadling has long since been sunk in synonymy under *Chortophaga viridifasciata* DeGeer.

¹² Rehn & Hebard, Proc. Acad. Nat. Sci. Philad., p. 381 (1908); id, p. 144 (1909).

¹³ Rehn & Hebard, Proc. Acad. Nat. Sci. Philad., p. 145, foot-note (1909).

¹⁴ Rehn, Proc. Acad. Nat. Sci., Philad., p. 34, 71 (1907).

¹⁵ Hart, Bull. Ill. State Lab. Nat. Hist., vol. vii, p. 259 (1907).

¹⁶ Caudell, Can. Ent., vol. xxxv, p. 302 (1903).

¹⁷ Rehn, Proc. Acad. Nat. Sci. Philad., p. 167 (1907).

P. 188.—*Chorthippus coloradensis* McNeill is a synonym of *C. curtipennis* Harris.¹⁸

P. 188.—*Stenobothrus occipitalis* Thomas has long been referred to the genus *Cordillacris* (*Alpha*). It is correctly entered on p. 116.

P. 188.—*Stenobothrus olivaceus* Morse has long been re-referred to the genus *Cordillacris* (= *Alpha*). It is correctly p. 119.

P. 195.—Records of *Arphia fallax* from Florida are probably mistakes, the locality intended probably being Mexico.

P. 196.—*Arphia teporata* is a synonym of *A. arcta*.

P. 198.—*Arphia hesperiphila* Rehn is a *Lactista* and a synonym of *Lactista gibbosa* Saussure.¹⁹ It is correctly entered on p. 236.

P. 198.—The *Oedipoda differentiale* here listed is only a reference under this name by Riley to the common *Melanoplus differentialis*.

P. 204.—*Hippiscus sierra* Rehn belongs to the genus *Xanthippus* if that genus is to be used. In the writer's opinion the characters used for the differentiation of *Stictippus*, *Cratypedes*, *Xanthippus* and *Pardolophora*, while useful in separating species, are not of generic value. The retention of these groups as subgenera is not to be encouraged as the tendency is, at least in Orthoptera, to either suppress subgenera or raise them to generic rank.

P. 205.—The generic name *Cratypedes* was first put into print by Scudder²⁰ but was used in an invalid manner, having included only an undescribed species. The next writer to use the name was Thomas²¹ who validated it by describing under it a new species, *C. putnami*. Thus the genus is creditable to Thomas but it is a synonym of *Xanthippus* Saussure and both of these genera, in the reviewer's opinion as stated above, should be sunk under *Hippiscus* Saussure.

¹⁸ Bruner, Biol. Cent.-Amer., Orth., vol. ii, p. 92 (1904).

¹⁹ Bruner, Biol. Cent.-Amer., Orth., vol. ii, p. 168 (1905).

²⁰ Bull. U. S. Geol. Surv. Terr., vol. ii, p. 267 (1876).

²¹ Proc. Davenport Acad. Nat. Sci., vol. i, p. 257 (1876).

P. 216.—The type of *Chloeobora* Saussure is given as species No. 6 while but four species are listed, a good illustration of this unsatisfactory method of type citation. *Ch. grossa* may be taken as the type of *Chloeobora*.

P. 234.—The *Oedipoda belfragii* of Stal is best sunk definitely in synonymy under *Spharagemon aequale* as has been done questionably for over a decade. Likewise the *Dissosteira texensis* of Saussure is best disposed of definitely in synonymy under *Spharagemon aequale* as Morse did questionably in 1895.²² Bruner²³ quotes this species as a probable synonym of *Spharagemon cristatum*, but the original diagnosis does not seem to justify this, the relationship being more clearly with *aequale*.

P. 236.—Mr. Kirby has here, species No. 3, confused two distinct species. The species described by Bruner in 1889 as *Oedipoda* (?) *occidentalis* is a species of *Circotettix* while the *Scirtettica occidentalis* of the same author described four years later is a quite different species and is a true *Scirtettica*.

P. 238.—*Lactista boscanus* Rehn is a synonym of *Tomonotus astecus* as shown by Bruner²⁴ and admitted by Rehn.²⁵

P. 244.—*Derotmema lentiginosum* Scudder belongs to the genus *Trimerotropis* and is a synonym of *T. gracilis*.²⁶

P. 249.—*Oedipoda kiova* Thomas belongs to the genus *Trachyrhachys*, not to *Trepidulpus* as here listed. The same is true of *Mestobregma pulchella* Bruner.

P. 251.—*Psinidia amplicornis* Caudell is a true *Psinidia*.

Conozoa melleola Scudder is a species of *Trepidulus*.

Agonozoa McNeill, as shown by Rehn²⁷ is a synonym of *Trimerotropis* s. s. *Trimerotropis texana* Bruner may be considered as the type of *Agonozoa*.

P. 255.—*Pseudotrimerotropis* Rehn, of which *Trimerotropis*

²² Psyche, vol. vii, p. 293 (1895).

²³ Biol. Cent.-Amer., Orth., vol. vii, p. 166 (1905).

²⁴ Biol. Cent.-Amer., Orth., vol. ii, p. 169 (1905).

²⁵ Proc. Acad. Nat. Sci. Philad., p. 149 (1909).

²⁶ Caudell, Proc. Ent. Soc. Wash., vol. xi, p. 113 (1909).

²⁷ Rehn, Trans. Amer. Ent. Soc., vol. xxvii, p. 334 (1901).

vinculata Scudder may be taken as type, is based upon characters which are not, in the reviewer's opinion, of generic importance and the genus should be sunk in synonymy under *Trimerotropis*.*

P. 263.—*Hadrotettix mundus* Scudder belongs to the genus *Trimerotropis*.²⁸

Hadrotettix gracilis Bruner was a nomen nudum until it was validated by Bruner in 1897. It is now referred to the genus *Trimerotropis* where it is preoccupied and is replaced by *Trimerotropis bruneri* McNeill, a name proposed for that purpose.

P. 278.—The *Oedipoda venusta* of Stal has long been located in the genus *Spharagemon*. It is a common Pacific coast species.

P. 341.—Here is another example of the ill working of type citation by number, the type of *Charilaus* Stal being given as No. 4, while but three species are catalogued. *C. carinatus* Stal is the type species.

P. 369.—The use of the emended form *Rhomalea* instead of *Romalea* as originally spelled is not in accordance with the laws bearing upon such matters.

P. 370.—The *Romalea gloveri* here introduced is but a color variety of *Romalea microptera*.

P. 370.—The locality California under *Litoscirtus insularis* should be Lower California.

P. 434.—*Ommatolampis brevipennis* Thomas is a species of *Hesperotettix*. It is correctly entered on p. 499.

P. 461.—*Acridium ambigua* Thomas is a synonym of *Schistocerca americana* Drury.

P. 462.—*Acridium frontalis* Thomas is a synonym of *Hesperotettix speciosus* Scudder. It is correctly entered on p. 500.

[* The name *Pseudotrimerotropis* was proposed to replace the restricted *Trimerotropis* of McNeill, true *Trimerotropis* being equal to his *Agonozoa*. The author of the name has never considered it of more than subgeneric rank. (J. A. G. R.)]

²⁸ Caudell, Proc. Ent. Soc. Wash., vol. xi, p. 112 (1909).

P. 462.—*Acridium milberti* Serville has long been placed in synonymy under *Melanoplus femoratus* Burmeister.

P. 468.—*Sauracris locusta* is a misspelling for *S. lacerta*.

P. 493.—The *Pezotettix humphreysii* of Thomas is a species of *Melanoplus*.

P. 500.—The type of *Aeoloplus* Scudder is, by original designation, *Caloptenus regalis* Dodge,* not *Caloptenus turnbulli* Thomas as here stated.

P. 507.—Scudder's Revision of the Melanopli in Proc. U. S. Nat. Mus., vol. xx, quoted by Kirby under the various genera of this group as 1898 was really published December 28, 1897, as stated in the list of papers in the completed and bound volume of that publication.

P. 507.—The species *bruneri* Caudell here listed in the genus *Ascmoplus* is catalogued wrongly, its proper position being in the genus *Aeoloplus*.

P. 542.—*Pezotettix flavoannulatum* LaMunyon is a synonym of *Dactylotum pictum* Thomas. *Dactylotum picturatum* Bruner is to be used for the purpose for which it was erected, that is to replace the preoccupied *pictum* of Gerstaecker. *Dactylotum longipenne* Townsend is a *Poecilotettix* and a synonym of *P. sanguineus* Scudder and replaces that name, being the older and properly established. The synonymy of these species was first indicated by Bruner,²⁹ but he used Scudder's name, wrongly considering *longipennis* as a MSS name.

Additional notes on Vol. I.

The genus *Photina* is duplicated, appearing on p. 257 and again on p. 273. The first reference should be eliminated.

The types of *Hestiasula* Saussure, *Harpagomantis* Kirby and *Menexenus* Stal, like all the genera in this catalogue, are indicated by number and, as so often the case, the number quoted as that of the type species is greater than the number of species included. Error is evident.

²⁹ Biol. Cent.-Amer., Orth., vol. ii, p. 329 (1908).

[* This should be *Aeoloplus regalis* Scudder, not *Caloptenus regalis* Dodge, which Bruner has shown to be a *Melanoplus*. The *regalis* of Scudder has been renamed *bruneri* by Caudell. (J. A. G. R.)]

Additional notes on Vol. II.

The genus *Ephippigera* of Serville seems properly established and should be used in place of *Ephippigerida* Buysson. *Ephippigera* was first proposed by Latreille in 1825 but lacked validity, having no species included in it. Serville validated the name in 1831 by including under it several valid species.

Orocharis terebrans Saussure & Zehntner³⁰ was omitted from the catalogue.

The genus *Platyxyphus* of Walker is properly established, being the raising of Haan's species *platyxyphus* to generic rank. The genus is valid, in spite of Walker's apparent haziness regarding the matter, and the type is *Gryllus platyxyphus* Haan. This genus antedates and replaces the genus *Pteroplistes* of Brunner and the three species listed under that genus should be catalogued under *Platyxyphus*, and *Pteroplistes* sunk in synonymy under that genus.

Pseudonemobius Saussure, p. 13 of Kirby, should be used in place of *Paranemobius* as this last name is an error and is corrected in the list of errors in the back of the work in which it is made. Besides the name *Paranemobius* is a *nomen nudum*, occurring only in a table of genera and without citation of described species. *Paranemobius* was, however, given standing by Bolivar in 1900 and thus preoccupies the *Paranemobius* of Alfken described in 1901. Kirby has replaced Alfken's genus by *Caconemobius*.

Gryllus lineaticeps Walker, 1869, is preoccupied by *Gryllus lineaticeps* Stal, 1858. Walker's type is apparently lost as it is not marked as present in the British Museum. A new name for it is needed if it is to remain in our lists as a valid species. but, owing to its doubtful status, I think it best to consider it eligible for listing only as an unrecognizable species.

Pterolepis caucasica Fischer is listed on p. 180 under the genus *Paradrymadusa* and on p. 199 under the genus *Pholidoptera*. The former is the proper disposition.

The genus *Thliboscelus* of Serville was established with a single included species, the *Locusta camellifolia* of Fabricius.

³⁰ Biol. Cent.-Amer., Orth., vol. i. p. 277 (1897)

That species is therefore the type of the genus. That Serville misidentified Fabricius' species does not alter this fact according to sound nomenclatural reasoning. Thus *Thliboscelus* falls as a synonym of *Pterophylla* Kirby & Spence, both genera being based upon the same species. The Brazilian insect wrongly considered as the *camellifolia* by Serville without a name as a mere identification is not to be perpetuated as a distinct species, though Kirby, p. 345, has followed Brunner, Monogr. Pseudoph., p. 148, in doing so in this case. I propose the specific name *brasiliensis* for this insect and refer both it and the *Cyrtophyllus crepitans* of Redtenbacher to the genus *Pterophylla*, considering neither generically distinct from the other members of that genus.

The Male of the Black Scale (*Saissetia oleae* Bern.) (Hemip.).

By H. J. QUAYLE, Berkeley, Cal.

While the black scale (*Saissetia oleae* Bern.) is very widely distributed over the world, little has been known and practically nothing published about the male. It was first described by Dr. B. W. Griffith, of Los Angeles, in 1893. It was then said to be limited to a small area in the vicinity of Los Angeles, California. During the past year or two we have taken it at various places in the citrus belt from Santa Barbara to San Diego. It seemed to be especially abundant during the season of 1909. In places where it occurred that year, it was not nearly so abundant in the previous year or the year following. As many as ninety-seven puparia, from all of which males had emerged, have been seen on a single orange leaf. The males have been taken from the leaves of orange, oleander, pepper and olive. They emerged during the months of June, July, August, September, October, November, December, January and possibly other months, though not yet observed.

The Second Stage Male. Up to the time of the first moult there is no difference between the sexes. After the first moult